

**Delta Operations for Salmonids and Sturgeon (DOSS) Group**  
**Conference call: 03/29/11 at 9:00 a.m.**

**Objective:** Provide advice to the Water Operations Management Team (WOMT) and National Marine Fisheries Service (NMFS) on measures to reduce adverse effects from Delta operations of the Central Valley Project and the State Water Project on salmonids and green sturgeon. DOSS will coordinate the work of other technical teams. DOSS notes and advice can be found at: <http://swr.nmfs.noaa.gov/ocap/htm>

**DWR:** Andy Chu, Mike Ford, Angela Llaban, Tracy Pettit, Cynthia LeDoux-Bloom

**FWS:** Roger Guinee

**NMFS:** Barbara Rocco, Barb Byrne, Garwin Yip

**DFG:** Dan Kratville

**Reclamation:** Josh Israel, Thuy Washburn

**SWRCB, EPA:** not present

**Action Item Carried**

- 1) **DWR (Chu)**—coordination of real-time monitoring with Reclamation staff. No new update. Action will carry to next meeting. DOSS agreed that, rather than provide weekly updates, DWR could provide an update when there was substantive progress to report on. The group also agreed that needed improvements should be in place by October 2011.

**Agenda**

- 1) Fish monitoring data
- 2) Water project operations and OMR flows
- 3) Article 21 and 215 water
- 4) VAMP and non-physical barrier at Head of Old River
- 5) 6-year acoustical study
- 6) weather forecast

Additional items: DWR (Ford) wanted to discuss with the DOSS group the information regarding Vernalis flows and export restrictions according to Action IV.2.1 of the NMFS BiOp. The table below presents the action; however, please refer to the BiOp p.641-643 for a complete description.

**Action IV.2.1 San Joaquin River Inflow to Export Ratio**  
**Phase I: Interim Operations in 2010-2011**

Combined CVP and SWP exports shall be restricted through the following:

Flows at Vernalis (cfs)	Combined CVP and SWP Export
0-6,000	1,500 cfs
6,000-21,750*	4:1 (Vernalis flow:export ratio)
21,750 or greater	Unrestricted until flood recedes below 21,750 cfs

\* Flood warning stage at Vernalis is 24.5 feet, flow is 21,750 cfs at this point. Flood stage is 29 feet with a corresponding flow of 34,500 cfs. Data from CDEC looking at April 8-9, 2006 period. As such, recognizing that the flows associated with these stages do vary, the trigger allowing unrestricted exports will be a Vernalis stage of 24.5 feet.

From April 1 through May 31, if Vernalis flows > 21,750 cfs, exports from CVP and SWP remain unrestricted. There was a question about whether this was a daily flow rate or based on some other timeframe. According to DWR, exports and Vernalis flows are based on a 3-day average and DWR will use that 3-day average to determine unrestricted flows vs. combined exports. DWR looks at the forecast (3–4 days out; same as NOAA weather forecast) information to schedule exports to be in compliance. For this week, DWR will look at the 3-day average from 3/27/11 and then look at the forecast to ensure compliance. Today (3/29), the 3-day average flow at Vernalis is 19,500 cfs, so falls within the 4:1 ratio. Today's flow increased to 22,700 cfs. The NOAA forecast at Vernalis is that flows will continue to increase. Therefore, DWR will use 20,000 cfs for 4/1/11 and will look at real-time data each day to adjust the export schedule accordingly.

**Action Item:** DWR (Chu) will write up the exact language and send to NMFS

**Court proceedings:** NMFS (Byrne) There was a request for a temporary restraining order (TRO)/preliminary injunction against the calendar-based OMR flow restrictions of Action IV.2.3 and against the I:E ratio component of Action IV.2.1; the hearing occurred last week in Fresno Federal court. Because the plaintiffs withdrew the request to enjoin the OMR action, the ruling will apply only to the I:E ratio of Action IV.2.1 (and not the Vernalis flow component of Action IV.2.1). The plaintiffs requested that the court rule on the TRO by Wednesday, 3/30/11<sup>1</sup>.

**Action items from 3/22/11 conference call:**

**Josh Israel**—reading of coded wire tags at federal facility. Israel reported that he had spoken with staff at the Tracy Pumping Plant. He had no other information to report.

**Cynthia LeDoux-Bloom**—reported out on meeting with Dean Messer, DWR, concerning improving methods of reading coded wire tags (CWTs). She reported on some workflow timing information that she had collected. While the number of CWT fish that are salvaged varies from day to day, she estimated that the typical time required to read CWTs would be ½ to one hour of work/day. The maximum number of CWTs retrieved is 44 in 1 day. On average, about 5 CWTs could be read in 1 hour. She has submitted ideas to DWR management concerning resources available to improve the CWT-reading turnaround, but has not yet heard back. Llaban: discussed the possibility of a change in funding to accommodate CWT reading.

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<sup>1</sup> In fact, after the DOSS call, the court declared (late on Monday); “Federal Defendants have notified the Court that based on anticipated hydrologic conditions, RPA Action IV.2.1. will not be implemented this water year. This notice appears to moot the pending request for a preliminary injunction and restraining order to enjoin implementation of RPA action IV.2.1, obviating the need for judicial intervention. If any party disagrees, that party should immediately notify the Court. SO ORDERED.”

**Fish Monitoring:** The following table presents the fish monitoring data from 3/21 to 3/28/11.

(Key: FR = Fall run; LFR = Late-fall run; SR = Spring run; WR = Winter run; SH = Steelhead; DS = Delta smelt; LFS = Longfin smelt; SPTL = Splittail, CPUE = catch per unit of effort)

Location	Chippis Is. Midwater Trawl	Sac. R. Kodiak Trawl	Mossdale Kodiak Trawl	Beach Seines	Knights Landing RST	Tisdale Weir RST	Moulton Weir RST	Deer/Mill Creeks RST
<b>Sample Date</b>	3/21, 23, 25	3/21, 23	3/21, 25	3/22, 24	3/23– 3/28	3/23–3/28	Not available	Not available
<b>Total Catch</b>	21	10	2	267	450	260		
<b>FR</b>	0	10	1	249	432	245		
<b>LFR</b>	0	0	0	0	0	0		
<b>WR</b>	6	0	1	0	3	1		
<b>SR</b>	3	0	0	15	14	13		
<b>(Ad-clips)</b>	1	0	0	0	1	0		
<b>DS</b>	9	0	0	1	0	0		
<b>LFS</b>	0	0	0	0	0	0		
<b>SPTL</b>	1	0	0	2	0	0		
<b>SH (ad-clip)</b>	1	0	0	0	0	1		
<b>SH (wild)</b>	0	0	0	0	0	0		
<b>Temp (avg. °F)</b>	50.3	48.7	50.9	49.7	50.4	48.6		
<b>Flows (avg. cfs)</b>					27,820	46,150		
<b>Turbidity (avg. NTU)</b>					122.7	63.3		
<b>FR/SR avg. CPUE</b>					38.0	44.1		
<b>WR/LFR avg. CPUE</b>					0.20	0.17		

Moulton: The fish-monitoring at Moulton was stopped. DFG reported that they would learn tomorrow about whether or not funding would be available to continue monitoring at this station.

It was requested that the data sheets clearly note any periods of “zero effort” if the rotary screw traps are not in place; DFG will consider this data recording adjustment.

Tisdale: 1 WR caught on 3/26/11. DFG is waiting for the debris field to pass to decide whether more traps will be put in.

Knights Landing: 1 WR was caught on 3/26 and 2 were caught on 3/28. It was noted that flow data comes from the Wilkinson Slough gage.

Chippis Island: 6 WR and 3 SR were reported; 9 DS were also reported.

**Salvage data (3/21-3/27):** For additional info:

<http://www.water.ca.gov/swp/operationscontrol/calfed/calfedmonitoring.cfm>

## Chinook salmon

CVP: No fall or late-fall run; 29 unclipped spring run lost; winter run loss = 55

SWP: No fall run; 77 unclipped spring run; winter run loss = 114

Cumulative totals: Combined loss is 169 winter run Chinook for the week, YTD total is 4,082 (573 CVP, 3,509 SWP) since October 1, 2010. The incidental take level is 6,640 winter-run.

## Steelhead

CVP: salvaged 4; SWP: salvaged 12. The combined YTD salvage is 280, since October 1, 2010.

**Older juvenile Chinook loss and loss density**: DOSS confirmed the combined older juvenile Chinook salmon loss density at the fish facilities as provided in the following table. In the following chart, zeroes indicate days with no observed loss at the fish collection facilities under some level of pumping and dashes indicate days when no pumping took place and the fish collection facilities did not operate.

### SWP & CVP OLDER JUVENILE\* CHINOOK LOSS & LOSS DENSITY 03/21/2011 through 03/28/2011

Date	OLDER JUVENILE LOSS** (# fish)			Combined Older Juvenile Loss Density (fish/TAF)
	SWP	CVP	Combined	
03/21/2011	0.00	11.52	11.52	0.84
03/22/2011	78.29	28.80	107.09	7.74
03/23/2011	8.59	14.40	22.99	3.35
03/24/2011	***	***	***	***
03/25/2011	***	***	***	***
03/26/2011	0.00	***	0.00	0.00
03/27/2011	26.81	***	26.81	3.05
03/28/2011	69.28	0	69.28	8.54

DWR-DES 3/28/2011

3/28/11 data: preliminary, subject to revision

\*Older juveniles defined as all Chinook above the minimum winter run length (Delta Model)

\*\*Loss data obtained from DFG, Stockton

\*\*\*Indicates no pumping on those dates

The preliminary estimate of combined older juvenile loss density for Monday, 3/28/11, was 8.54 fish/TAF, based on a combined loss of 69.28 (69.28 fish at the SWP and 0 fish at the CVP) and combined exports of 8.109 TAF (6.916 TAF at the SWP and 1.193 TAF at the CVP). This is above the second stage trigger of the juvenile production estimate-based 1<sup>st</sup> OMR trigger (6.64 fish/TAF). All of the older juveniles were identified as winter-run, according to their length at date. Other pertinent points discussed;

1. The confirmed loss density of 3.35 fish/TAF on 3/23 was reported on 3/24 as the DWR calculated loss density.
2. The “zeros” (days of no pumping) for 3/24 and 3/25 should have triggered an emergency call because the combined loss density on 3/23 (3.35 fish/TAF) was within 0.1 fish/TAF of a trigger which would have allowed OMR to be relaxed. In addition, on 3/24/11 DOSS should have received DFG’s actual combined loss density for 3/23, but it did not.
3. An emergency call was not initiated on 3/25 (after receipt of DWR’s calculated loss density) because DOSS did not receive DWR’s calculated loss densities for 3/25 to 3/27 until 3/28 (Monday).

**Spring-run surrogates:** The confirmed loss for the two releases of the coded-wire-tagged (CWT) spring run surrogates is: December release group = 0.153%, January release group = 0.040%. The projected loss for those releases including the unread CWTs is: December release group = 0.164%, January release group = 0.043%. No salvage of hatchery winter run has been confirmed at either facility so far this year. There are 16 unread tags at the state facility.

**Smelt working group (SWG) update:** The SWG notes are posted at:

<http://www.fws.gov/sfbaydelta/ocap/>

#### Operations (3/22/11)

SWP		CVP	
Flows/Exports (cfs)			
Clifton Court Forebay	3,500	Jones Pumping Plant	3,500
Outflow		American- Nimbus	12,300
Total Delta Inflow		Sacramento-Keswick	50,000
		Stanislaus - Goodwin	1,300–1,600
Feather - Oroville	15,000	Merced	
Sacramento River at Freeport	80,000	Mokelumne	
San Joaquin at Vernalis	21,000	Tuolumne	
OMR (daily)	6,950		
OMR 5 day	7.087		
OMR 14 day	833		
Reservoir Storage (TAF)			
San Luis		San Luis	
		Shasta	3,226
Folsom	649		
New Melones	1,921		
Oroville			
Delta Operations			
DCC	closed	X2 (km)	West of Martinez
Outflow Index (cfs)	194,000		
Inflow diverted (%)	2.5		
Water Temperature (°F)	11.3		

**Other Operations updates:** New Melones Reservoir will most likely fill this year. The Yolo bypass is flowing at ~80,000 cfs over the Fremont Weir. There will be a power outage tomorrow (3/30/11) to conduct repair work at Banks Pumping Plant. Inflow to Clifton Court Forebay will be zero; flows will go back up on Thursday (3/31/11).

**Article 21 and 215 water:** The SWP is offering Article 21 water and the CVP is offering Article 215 water. Because demand is low, in general, few requests have been received by either project.

**VAMP:** DOSS discussed the timing of VAMP studies this year. Since VAMP will not be implemented for a few weeks DOSS has time to consider the rationale for starting later, therefore, the group agreed to keep VAMP on the agenda for next week. The delay is due to the high flows and size of release fish (too small to tag yet). It was noted that there should be coordination with the VAMP group as to the expected operations under the new I:E ratio (which could include no export restrictions if Vernalis flows stay high) In addition to the NMFS required action for steelhead, DWR reminded the group that competing requirements for delta smelt and longfin smelt may also need to be considered, or prioritized, and that DWR did not sign the VAMP extension agreement.

**Non-physical barrier at Head of Old River:** Flow constraints on installing and operating the non-physical barrier were discussed; if flows at Vernalis remain at current levels it's unlikely that the barrier can be installed.

**Non-physical barrier at Georgiana Slough: (LeDoux-Bloom):** The non-physical barrier at Georgiana Slough was non- functioning on Sunday (3/27/11) because of a problem with the air supply and an inability to get divers in the water to determine and fix the problem because of the high flows on the Sacramento River. Implementing this barrier is a huge project but worth the data we're getting. NMFS RPA action IV.1( page 631) requires engineering studies of methods to reduce the loss of salmonids entering the interior delta.

**6-year acoustic experiment:** (Israel) 480 steelhead were released last week on the San Joaquin River in release groups separated by 6 hours. Chinook salmon juveniles were released at the same time so it will be possible to compare survival and migration speed between the two species. Some equipment needed to be moved to higher ground because of the high flows.

**Weather forecast:** The weather is expected to be dry this week with a new system coming on Saturday. Vernalis is projected to remain above 21,750 cfs through early April.

#### **DOSS advice to WOMT and NMFS:**

Because of very high flows at Vernalis and low demand for exports, OMR flows have increased to positive levels in recent days. While Action IV.2.3 of the NMFS BiOp is still in effect, and DOSS will continue to track older juvenile loss density and provide advice to NMFS and WOMT, Action IV.2.3 is not currently constraining exports and is unlikely to constrain exports while flows at Vernalis remain high.

The preliminary loss density reported for Monday, 3/28/2011, was 8.54 fish/TAF, which exceeds the second state trigger level of 6.64 fish/TAF. DOSS advises NMFS and WOMT that CVP and

SWP operations should continue<sup>2</sup> to operate to an OMR flow limit of no more negative than -2,500 cfs until 3 consecutive days of older juvenile loss density below either the first or second stage loss density triggers in the NMFS BiOp.

The OMR limit may be relaxed as early as Friday, 4/1/2011. If, for example, the loss densities for Tuesday (3/29), Wednesday (3/30), and Thursday (3/31; reported on Friday) are below 6.64 fish/TAF, the OMR limit may be relaxed to no more negative than -3,500 cfs. If the loss densities for Tuesday (3/29), Wednesday (3/30), and Thursday (3/31; reported on Friday) are below 3.32 fish/TAF, the OMR limit may be relaxed to no more negative than -5,000 cfs.

NMFS will notify DWR and Reclamation on Friday, 4/1/11, if the OMR limit may be relaxed based on loss densities for Tuesday–Thursday. Because, under current hydrologic conditions, the OMR limit in place under Action IV.2.3 (even at the most restrictive limit of -2,500 cfs) is not currently controlling export operations, and is also not expected to control exports throughout this weekend, NMFS will consult with DWR and Reclamation about whether tracking loss densities and the OMR limit will be necessary over the weekend.

**Action Item: NMFS (Oppenheim)** - Since he was in Tracy attending the Fish Facility Technical Team meeting could not attend this call. Oppenheim will report on the Tracy meeting at the next conference call on 4/5/11.

**Next Meeting:** Conference call, 4/5/11, 9:00 a.m.

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<sup>2</sup> The projects have been operating to an OMR limit of -2,500 cfs since March 14, 2011. The loss densities for March 24, 25, and 26 (and March 25, 26, and 27) provided three consecutive days below the first stage trigger level of 3.32 fish/TAF, which would have allowed a relaxation of the OMR limit to -5,000 cfs. However, NMFS, DWR and Reclamation did not discuss OMR management and recent loss densities until the DOSS call on March 29<sup>th</sup>, and no operational shift to a more relaxed OMR limit was implemented.